ASSIGNMENT 7

Textbook Assignment: "Pontoons" and "Pre-engineered Structures: Short Airfield for Tactical Support," pages 10-2 through 11-27.

Learning Objective: Identify the design and construction features of P-series pontoons and attachments.

7-1. What types of pontoons are used to form a continuous ramp for causeway ends and barge bows?

1. P1 and P2
2. P3 and P4
3. P1 and P3
4. P2 and P4

7-2. What pontoon number does a P2 become when quick-lock connectors are fixed to-its bow?

1. P5
2. P2
3. P3
4. P4

7-3. A 4 by 12 pontoon assembly consists of

1. 4 pontoons, each 12 feet square
2. several 4-foot by 12-foot pontoons
3. 4 pontoon strings in width and 12 pontoons long
4. 4 pontoon strings, each 12 feet long

7-4. Assembly angles E16L and E26R are designed to be used

1. as basic condition angles on the edges of the pontoon strings
2. as basic condition angles anywhere on the pontoon strings
3. as end condition angles on left and right edges, respectively, of the pontoon strings
4. as basic condition angles only to be used on topside of the continuous angles

7-5. What device is used to prevent an A6 assembly bolt from working out of assembly angles?

1. A cotter pin
2. Keeper plates
3. Flanged nuts
4. Links

7-6. What accessory is used for connecting pontoon strings at the point where each string has a P3 sloped-deck ramp pontoon connected to a P1 pontoon?

1. AP8 ramp-end bent plate
2. AP7 gusset plate
3. AP6 chafing plate
4. AP5 end plate

7-7. When installing RF1 rubber fenders, you use the RF4 fender bracket for what purpose?

1. Horizontal fender connections
2. Corner installations
3. Drop fender installations
4. Diagonal fender installations

7-8. The H6 hatch cover and floor panel assembly are primarily used to convert what type of pontoon into a storage compartment?

1. P1
2. P2
3. P5M
4. P4

7-9. The DC6 deck closure is used

1. to bridge openings or slots between pontoons
2. to bridge the space between adjacent causeway sections being set up
3. to make a bridge to wharf connection
4. to make a barge to wharf connection

7-10. What bitt is desiqned for quick positioning in the chain plate of a causeway section?

1. The B1 all-purpose bitt
2. The MI147 double bitt
3. The B4 retractable bitt
4. The LK12 utility bitt

Learning Objective: Identify the fundamentals of assembling pontoons to form a string, launching the string, and joining launched strings to form barges and causeways.

7-11. At what location should you position the first and succeeding pontoons after the first two assembly angles are installed in a causeway section?

1. The first pontoon is placed in the center of the angle and succeeding pontoons on each side of the first one
2. The first pontoon is placed on the bow and succeeding pontoons on the stern, working forward
3. The first pontoon is placed on the bow, the second on the stern, the third on the bow, and the fourth on the stern
4. The first pontoon is placed on the stern then succeeding pontoons work outward and forward

7-12. In which of the following ways are A6B bolts used in the construction of pontoon systems?

1. To connect strings into structures
2. To secure assembly angles to pontoons at each corner
3. To secure deck fittings and accessories
4. All of the above

7-13. After being launched, what special tool is used to clamp together a series of pontoon strings?

1. JT7 drive wrench
2. JT8 backup wrench
3. JT13 two-piece aligning tool
4. JT2 top angle clamp

7-14. The JT13 aligning tool should be used when the differences in the hole alignment between angles restrict easy passage of A6B bolts.

1. True
2. False

7-15. What pontoon barge was designed for mounting a crawler crane?

1. The 3 by 12
2. The 4 by 12
3. The 5 by 12
4. The 6 by 18

7-16. What is the primary use of the 10 by 30 barge?

1. As a 1,500 barrel fuel storage tank
2. As a mount for a 100-ton derrick
3. As a heavy-duty wharf structure
4. As a warping tug

7-17. A pontoon causeway consists of what sections?

1. One inshore and one offshore with as many intermediate sections as required for length
2. One inshore, one intermediate, and two offshore
3. Two inshore, two offshore, and two intermediate
4. One inshore and two offshore

7-18. What types of pontoons make up an inshore section of a causeway?

1. P1, P5M, and P4
2. P1, P2, P3, and P4
3. P1, P5F, and P5M
4. P1, P3, P4, and P5M

7-19. Causeway sections are normally deployed on what type of ship?

1. LSD
2. LCM
3. LST
4. LPD

7-20. To submerge the decks of a dry dock to its maximum depth of 12 feet, you need a sheltered area with a smooth bottom with how many feet of quiet water?

1. 12 to 14
2. 18 to 20
3. 22 to 24
4. 24 to 26

7-21. What type(s) of pontoons are used to form dry docks?

1. P1 and P5M
2. P1, P2, and P3
3. P1 only
4. P4 only

Learning Objective: Identify the design, use, and features of the Elevated Causeway Sections (ELCAS).

7-22. The ELCAS is used to bridge the surf zone.

1. True
2. False

7-23. A standard ELCAS consists of three 3 by 15 approach/roadway sections and

1. nine 3 by 15 pierhead sections
2. six 3 by 15 pierhead sections
3. three 3 by 15 pierhead sections
4. four 3 by 15 pierhead sections

7-24. What unique component of the ELCAS system gives it the ability to elevate?

1. P1 pontoons
2. Supporting pilings
3. Spudwells
4. 3 by 15 intermediate causeway sections

7-25. Internal spudwells are used in the inboard string of pierhead sections.

1. True
2. False

7-26. The ELCAS consists of a total of how many parts?

1. Eight
2. Six
3. Three
4. Four

7-27. How many spudwells are required to construct a type 3 pierhead section?

1. Three internal and four external
2. Four internal and four external
3. Four internal and three external
4. Three internal and three external

7-28. The fender system uses P8 pontoons as end-to-end connections instead of P5 pontoons since it is only one pontoon wide.

1. True
2. False

Learning Objective: Identify the construction features and functions of the major components of the Short Airfield for Tactical Support (SATS).

7-29. AM-2 matting is manufactured from what type of metal?

1. Steel
2. Aluminum
3. Iron
4. Copper

7-30. Why are AM-2 mats installed with their joints staggered in a brickwork fashion?

1. To stabilize the runway across its width and in the direction of aircraft travel
2. To stabilize the runway across its width and to make it flexible in the direction of aircraft travel
3. To make the runway flexible across its width and to stabilize it in the direction of aircraft travel
4. To make the runway flexible across its width and in the direction of aircraft travel

7-31. What are the contents of one full pallet assembly of AM-2 matting?

1. 11 half mats, 2 full mats, and 2 locking bars
2. 2 half mats, 11 full mats, and 2 locking bars
3. 4 half mats, 8 full mats, and 12 locking bars
4. 2 half mats, 11 full mats, and 13 locking bars

7-32. What does one F15 pallet assembly of AM-2 matting contain?

1. 2 half mats, 4 full mats, and 10 locking bars
2. 2 half mats, 8 full mats, and 20 locking bars
3. 4 half mats, 20 full mats, and 24 locking bars
4. 4 half mats, 16 full mats, and 20 locking bars

7-33. The standard pallet assembly (F11) provides a width of two rows (4 feet) on a runway or taxiway that is how many feet wide?

1. 54
2. 72
3. 69
4. 99

Learning Objective: Recognize the general principles and procedures for installing AM-2 runway mats.

7-34. When a SATS site for placement of AM-2 mats is being prepared, the surface must be leveled and graded so that over a span of 12 feet, the maximum variation in height of the mats is

1. 1 inch
2. 3/4 inch
3. 1/2 inch
4. 1/4 inch

7-35. For which of the following reasons should accurate longitudinal and transverse center lines be established before a SATS installation?

1. To ensure there is enough room for the airfield
2. To ensure that the site meets CBR requirements
3. To make the deployment of pallets easier
4. All of the above

7-36. What equipment is best suited for handling pallets of AM-2 airfield matting?

1. A motorized rough-terrain crane
2. A helicopter
3. A 4K forklift
4. A 6,000-pound rough-terrain forklift

7-37. In addition to the POIC, the typical installation crew assigned to lay a 96-foot-wide runway consists of what personnel?

1. 1 alignment man, 12 mat installation men, and 2 pry bar men
2. 2 alignment men, 12 mat installation men, and 2 pry bar men
3. 2 alignment men, 24 mat installation men, and 2 pry bar men
4. 2 alignment men, 12 mat installation men, and 4 pry bar men

7-38. The pry bar men of the installation crew are responsible for which of the following tasks?

1. Adjusting the first mat in each transverse row
2. Spacing the mats to allow for thermal installation and insertion of the mat-locking bars
3. Taking the mats from a pallet and installing them in place
4. All of the above

7-39. What is used as the starting point for laying runway mats in an installation not requiring a guide rail system?

1. The approach apron
2. The transverse center line
3. The longitudinal center line
4. The end opposite the approach apron

7-40. In an installation requiring a guide rail system, starter keylocks are used for laying runway mats.

1. True
2. False

7-41. To guide the crew in the installation of the AM-2 matting, you should install keylocks every 100 feet.

1. True
2. False

7-42. What action, if any, is recommended to prevent a seesaw force from disturbing the alignment of the matting when a keylock section is placed and aligned at the center line?

1. Lay several transverse rows of matting initially in opposite directions
2. Initially lay several transverse rows of matting in one direction only
3. Lay several longitudinal rows of matting in one direction
4. None

7-43. When AM-2 mats are being installed, the installers can prevent misalignment due to the “loose fit” design by taking what action?

1. Using locking bars as temporary spacers between the rows
2. Installing rubber spacers between the longitudinal rows
3. Installing rubber spacers between the transverse rows
4. Installing gap gauges between the transverse rows

7-44. What devices are used to secure typical 9-foot and 12-foot keylocks together?

1. Male-female edges
2. Locking bars
3. Socket head screws
4. Binding straps

7-45. On what type of surface should mat ends be laid?

1. Crushed rock
2. Concrete
3. Packed dirt
4. Sand

7-46. At what depth should the free end of the approach apron be buried?

1. Between 12 to 16 inches
2. Between 16 to 18 inches
3. Between 18 to 24 inches
4. Between 24 to 26 inches

7-47. When guide rails and mats are being laid, any depression in the grade that is not within specifications can be disregarded.

1. True
2. False

7-48. What total number of gap gauges should remain installed after the guide rail pins have been installed?

1. 10
2. 2
3. 5
4. 4

7-49. To speed up the installation of AM-2 mats, you should assume that no two parts are laid at the same time. For the field-laying procedure, what is the order of sequence of installation, first to last?

1. Lateral taxiway, main runway, parallel taxiway, and parking areas
2. Main runway, parallel taxiway, parking areas, and lateral taxiways
3. Main runway, lateral taxiways, parallel taxiways, and parking and storage areas
4. Lateral taxiway, parallel taxiway, main runway, and parking and storage areas

7-50. As described in the text for taxiway procedure #2, the space between the taxiway and the runway should fall within what size range, in inches?

1. 1 to 2
2. 2 to 3
3. 3 to 4
4. 4 to 5

7-51. Parking and storage areas may be laid with leftover mats in any random pattern.

1. True
2. False

Learning Objective: Identify the procedures for repairing damaged matting and for disassembling and removing the matting from the runway.

7-52. When cutting out a damaged AM-2 mat, you should make a cut along (a) what edge and (b) what connector?

1. (a) Female (b) prongs-up
2. (a) Male (b) prongs-down
3. (a) Female (b) prongs-down
4. (a) Male (b) prongs-up

7-53. In the lower adapter, the dowel pin functions as (1) a locating device in the placement of the upper and middle adapters on the lower adapter, and (2) a means of keeping the holes in the upper, middle, lower, and connector adapters in approximate alignment.

1. True
2. False

7-54. What action is taken to lock in place the locking bar of the replacement mat shown in figure 11-34 of the textbook?

1. The attachment of a clamp over the male connector
2. The bottoming of the setscrew
3. The tightening of the socket head screws
4. The insertion of the dowel pins

7-55. A section of SATS runway must be replaced. To remove the typical keylock section, you should ensure what step is taken first?

1. Pry the keylock out halfway
2. Insert the keylock removal tool
3. Remove the socket head screw
4. Loosen the socket

7-56. When replacing a SATS runway section, you remove the initial 3-foot and 6-foot keylock section by

1. hammering it out with a sledge
2. prying it with a bar
3. pulling it with a keylock removal tool
4. cutting it with a portable saw

7-57. The first row of runway mats can be disassembled and removed by lifting the entire row evenly with lifting blocks and pry bars and by pulling out the locking bars.

1. True
2. False

7-58. In the procedure for replacing damaged mats with new or refurbished mats, the last row of matting is raised in unison for what purpose?

1. To level the ground surface
2. To attach end connectors
3. To insert locking bars
4. To install the guard rail

7-59. What material should be used to reinforce filled cavities under AM-2 matting?

1. Dry sand
2. Crushed rock
3. Damaged AM-2 mats
4. Restored AM-2 mats

7-60. In which of the following ways should you position mats-so their edges can be straightened with the edge repair tool?

1. To give the tool clearance, place them on blocks that have the height to do this
2. When straightening male edges, place the tops of the mats face up
3. When straightening lower and upper female edges, place the bottoms of the mats face up
4. All of the above

7-61. What components do you remove last when using the most efficient procedure for disassembling a SATS runway (no guide rail)?

1. Typical keylocks
2. Female keylocks
3. Starter keylocks
4. Starter locking bars

7-62. When disassembling a guide rail equipped SATS runway, you should start removing mats from the end of the runway that was assembled last.

1. True
2. False